

Chapter VIII: Regulatory Flexibility

This chapter presents our Final Regulatory Flexibility Analysis (FRFA) which evaluates the impacts of our Tier 2 and gasoline sulfur standards on small businesses. Prior to issuing our proposal last May, we analyzed the potential impacts of our program on small businesses. As a part of this analysis, we convened a Small Business Advocacy Review Panel, as required under the Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA). Through the Panel process, we gathered advice and recommendations from small entity representatives (SERs) who would be affected by our proposed vehicle and fuel standards. The report of the Panel has been placed in the rulemaking record.¹ A month after our proposal was published in the Federal Register, we held four public hearings to obtain feedback on it. The small business provisions of today's action reflect changes to the proposed program based upon updated analyses as well as comments heard at the public hearings and those submitted in writing during the comment period.

A. Requirements of the Regulatory Flexibility Act

When proposing and promulgating rules subject to notice and comment under the Clean Air Act, we are generally required under the Regulatory Flexibility Act (RFA) to conduct a regulatory flexibility analysis unless we certify that the requirements of a regulation will not cause a significant impact on a substantial number of small entities. The key elements of the FRFA include:

- the number of affected small entities;
- the projected reporting, record keeping, and other compliance requirements of the proposed rule, including the classes of small entities that would be affected and the type of professional skills necessary for preparation of the report or record;
- other federal rules that may duplicate, overlap, or conflict with the proposed rule; and,
- any significant alternatives to the proposed rule that accomplish the stated objectives of applicable statutes and which minimize significant economic impacts of the proposed rule on small entities.

The RFA was amended by SBREFA to ensure that concerns regarding small entities are adequately considered during the development of new regulations that affect them. Although we are not required by the CAA to provide special treatment to small businesses, the RFA requires us to carefully consider the economic impacts that our rules will have on small entities. Specifically, the RFA requires us to determine, to the extent feasible, our rule's economic impact on small entities, explore regulatory options for reducing any significant economic impact on a substantial number of such entities, and explain our ultimate choice of regulatory approach.

Tier 2/Sulfur Regulatory Impact Analysis - December 1999

In developing the NPRM, we concluded that the proposed Tier 2 and gasoline sulfur standards would likely have a significant impact on a substantial number of small entities. To comply with the requirements of the RFA, we were required to quantify these economic impacts. The methodology used to calculate the per-refinery costs for desulfurizing gasoline is located above in Chapter 5.B.; the cost for an average small refiner to comply with the 30 ppm standard is described below in section C.

B. Description of Affected Entities

Our Tier 2/gasoline sulfur program will primarily affect manufacturers of LDVs, LDTs, and oil refiners that produce gasoline. Most companies in these industries do not meet the small business definitions provided in the U.S. Small Business Administration (SBA) regulations (13 CFR Part 121). However, we have identified several companies within these industries that are small businesses as defined by SBA. These businesses may be subject to the Tier 2 vehicle and gasoline sulfur standards and could be significantly impacted by the new standards. Table VIII-1, below, describes the affected industries, including the small business size standards SBA has established for each type of economic activity under the Standard Industrial Classification (SIC) and North American Industrial Classification systems.

**Table VIII-1. Industries Containing Small Businesses
Potentially Affected by Today’s Proposed Rule**

<i>Industry</i>	<i>NAICS¹ Codes</i>	<i>SIC² Codes</i>	<i>Defined by SBA as a Small Business If:³</i>
Petroleum Refiners	324110	2911	< 1500 employees
Petroleum Marketers and Distributors	422710 422720	5171 5172	< 100 employees
Independent Commercial Importers of Vehicles and Vehicle Components	811112 811198 541514	7533 7549 8742	< \$5 million annual sales
Alternative Fuel Vehicle Converters	336311 541690	3592 8931	< 500 employees
	336312	3714	< 750 employees
	422720	5172	< 100 employees
	454312 811198 541514	5984 7549 8742	< \$5 million annual sales
Motor Vehicle Manufacturers	336111 336112 336120	3711	< 1000 employees

1) North American Industry Classification System

2) Standard Industrial Classification system

3) According to SBA’s regulations (13 CFR 121), businesses with no more than the listed number of employees or dollars in annual receipts are considered “small entities” for purposes of a regulatory flexibility analysis.

1. Small Refiners

Of the approximately 160 petroleum refineries that currently produce gasoline in the U.S., about 15 meet SBA’s definition of a small business. SBA’s SIC code for petroleum refining is 2911. According to this code, a petroleum refining company must have fewer than 1500 employees corporate-wide to qualify as a SBA small business. Based on our small business analysis, we believe that some small refiners will have greater difficulty than larger refiners in

Tier 2/Sulfur Regulatory Impact Analysis - December 1999

complying with the standard(s), due to such factors as limited operational flexibility, lack of access to alternate crude oil feedstocks, limited availability of new sulfur reduction equipment, or difficulty in raising capital to finance projects.

2. Small Petroleum Marketers

While refiners are more affected by our gasoline sulfur control program than any other industry, some marketers of gasoline, many of which are small by SBA's definition¹, may also be impacted. However, this impact appears to be limited to new or expanded requirements for reporting the sulfur content of gasoline samples.

3. Small Certifiers of Covered Vehicles

In addition to the major vehicle manufacturers, three distinct categories of businesses relating to LDVs and LDTs exist that are covered by Tier 2 emission standards. Some companies in each of these categories are small businesses according to SBA regulations.

Small Independent Commercial Importers

Independent Commercial Importers (ICIs) are companies that hold a Certificate (or Certificates) of Conformity which permits them to alter imported vehicles to meet U.S. emission standards. As with alternative fuel vehicle converters described below, these businesses could face greater technical challenges if emission standards are tightened. We have identified five businesses in this category that are currently active and that appear to be small entities under SBA regulations.

Alternative Fuel Vehicle Converters

Under certain circumstances, our current policy permits the conversion of gasoline or diesel vehicles to operate on an alternative fuel without applying for and receiving the EPA Certificate of Conformity (also known as the "certification" process) that is required of conventional manufacturers. However, certification can provide certain benefits to a converter, and a few businesses have completed certification or have expressed interest in certifying alternative fueled vehicle models. Beginning in model year 2000, converters must seek a certificate for all of their vehicle models, although there will be some aspects of the certification

¹SBA defines small businesses in this category (SIC codes 5171 and 5172) as those with fewer than 100 employees. There are several hundred small gasoline marketers participating at various points in the national gasoline distribution system.

Chapter VIII: Regulatory Flexibility Analysis

process that will be simplified for small volume manufacturers (SVMs), including these converters. To the extent that companies are involved in this business when Tier 2 emission standards become effective, they will be subject to such standards and could face greater technical challenges in achieving the new standards with the vehicles they convert.

Small Volume Vehicle Manufacturers

We permit vehicle manufacturers selling 10,000 or fewer vehicles per year to be designated as SVMs. This status allows vehicle models to be certified under a slightly simpler certification process. More stringent Tier 2 standards will be relatively more difficult for small manufacturers to achieve than larger manufacturers because research and development resources are more limited. Less than five current SVMs meet the SBA guidelines for vehicle manufacturers of 1000 or fewer employees.

C. Projected Costs of the Proposed Gasoline Sulfur Standards

The costs for an average-size small refinery (19,000 bbls gasoline/day) to produce gasoline with a sulfur level of 30 ppm are described below in Table VIII-2. A more detailed discussion of our refinery cost analysis, in general, can be found above in Chapter 5.

Table VIII-2. Costs for a 19,000 bbls gasoline/day Refinery to Produce 30 ppm Gasoline

<i>Location</i>	<i>Per-Gallon Cost (cents/gallon)</i>	<i>Operating Cost (\$million/year)</i>	<i>Capital Cost (\$million/year)</i>
PADD III	1.47	3	14
PADD IV	2.58	6	28

Costs for a small refinery located in PADD II to produce 30 ppm gasoline would fall between the costs for a refinery in PADD III and a refinery in PADD IV.

In comparison, the average annual sales of small refiners in the U.S. were approximately \$385 million for 1997 based on data obtained from Dun & Bradstreet.

D. The Types and Number of Small Entities to Which the Proposed Rule Would Apply

Tier 2/Sulfur Regulatory Impact Analysis - December 1999

The types and number of small entities to which the proposed rule would apply are described in Table VIII-3, below.

Table VIII-3. Types and Number of Small Entities to Which the Proposed Tier 2/Gasoline Sulfur Rule Would Apply

<i>Type of Small Entity</i>	<i>Number of Companies Affected by Today's Rule</i>
Small Refiners	Approximately 15
Small Gasoline Marketers	Several Hundred
Small Certifiers of Covered Vehicles	Approximately 15

We have estimated that small refiners produce approximately four percent of all gasoline in the U.S., excluding California. In most cases, gasoline produced by small refiners is mixed with substantial amounts of other gasoline prior to retail distribution (due to the nature of the gasoline distribution system).

We are also aware that there are several hundred gasoline distributors/marketers in the U.S. The proposed rule may include a new requirement for them to add sulfur content to the set of gasoline quality parameters they currently report or record. However, this requirement should not be burdensome since sulfur content is generally measured along with other parameters and the results would simply need to be recorded and reported.

E. Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Proposed Rule

We are requiring that refiners and importers keep and make available to us certain records which demonstrate compliance with the sulfur program requirements. These records include information about each batch of gasoline produced or imported, including batch volume, sulfur test results and calculations used to determine compliance. We believe that the recordkeeping requirements for refiners and importers are necessary to allow independent auditors and our inspectors to determine if the gasoline produced or imported, in fact, met the applicable sulfur standards when it left the refinery or import facility. A similar record retention requirement is included in the RFG and anti-dumping regulations.

Because the information required to be reported under today's rule in many cases is not included in the RFG and anti-dumping compliance reports, and because we believe it would be

Chapter VIII: Regulatory Flexibility Analysis

difficult to adapt the present RFG and anti-dumping reports to include the information required under today's proposed rule, we are requiring refiners and importers to submit a separate annual sulfur compliance report along with the refiner's or importer's RFG and/or anti-dumping compliance reports. The sulfur report form is relatively short and will require only the minimum information necessary to demonstrate compliance with the applicable sulfur standards. Parties are required to include the refiner and refinery facility registration numbers or importer registration number issued under the RFG regulations, the total volume of gasoline (RFG and conventional gasoline) produced at the refinery (or refineries, if aggregated prior to 2006) or imported by the importer during the averaging period, and the annual average sulfur content of the gasoline produced or imported. Small refiners who have EPA-approved individual baselines are also required to include the sulfur standards applicable to the refinery.

F. Other Relevant Federal Rules Which May Duplicate, Overlap, or Conflict with the Proposed Rule

Our Tier 2 emission standards and gasoline sulfur control regulations are similar in many respects to existing regulations; in some cases, these regulations are replacing earlier requirements with more stringent requirements for refiners and vehicle manufacturers. However, we are not aware of any area where the new regulations would duplicate, overlap, or conflict with any existing federal, state, or local regulations.

G. Regulatory Alternatives

We considered a wide range of options and regulatory alternatives for providing small businesses flexibility in complying with the Tier 2 vehicle emission and gasoline sulfur standards. The regulatory flexibilities we are providing for small businesses are described below.

1. Small Refiner Interim Sulfur Standards

Upon careful review of the comments received on the proposal as well as the recommendations of the Small Business Advocacy Review Panel, we have determined that regulatory relief in the form of delayed compliance dates is appropriate to allow small refiners, both foreign and domestic, to comply with our regulations without disproportionate burdens. From 2004-2007, when other refiners must meet the 30/80 standards (or the standards listed in Table IV.C-1 of the preamble if they are participating in our ABT program), refiners meeting the corporate employee and capacity limits are allowed to comply with somewhat less stringent requirements. These interim annual-average standards, beginning in 2004, for qualifying small refiners are shown in Table VIII-4 below.

Table VIII-4. Temporary Gasoline Sulfur Requirements for Small Refiners in 2004-2007

<i>Refinery Baseline Sulfur Level (ppm)</i>	<i>Temporary Sulfur Standards (ppm)</i>	
	<i>Average</i>	<i>Cap</i>
0 to 30	30 ppm	300 ppm
31 to 200	Baseline Level	300 ppm
201 to 400	200 ppm	300 ppm
401 to 600	50% of baseline	Factor of 1.5 times the average standard
601 and above	300	450

The cap standards for the first two “bins” of refineries (that is those with baseline sulfur levels from zero to 30 and 31 to 200) have been relaxed somewhat based on comments that the proposed standards for these two bins were more stringent than the options under discussion for all other refiners. We believe that small refiners should be able to meet the average standards without much, if any, change to their operations but the more lenient cap will give them some flexibility for turnarounds or unexpected equipment shutdowns. In addition, small refiners may also use credits or allotments in 2004-2007 to comply with their average standards.

Compliance with these standards is based on a refiner’s demonstration that it meets our specific small refiner criteria. Refiners who qualify as a small refiner under our definition must establish a sulfur baseline for each of their participating refineries. Section IV.C.2. of the preamble explains these requirements in more detail.

Based on comments received on the proposal, we are also making four other changes to our small refiner program.

1. We are revising the employee number criterion.
2. We are adopting a cap on the corporate crude oil capacity for a refining company to qualify as a small business under today’s regulations.
3. We are allowing small refiners to use credits and allotments to meet their average standard (as specified in Table VIII-1) in addition to allowing them to generate credits (from 2000 through 2007) and allotments (2003 only).
4. We are requiring that small refiners expecting to apply for a hardship extension establish a compliance plan to demonstrate their commitment to produce low sulfur gasoline (described in subsection a below).

Chapter VIII: Regulatory Flexibility Analysis

In regard to the employee number criterion, we are modifying how the employee number is determined, based on comments received from SBA. As mentioned above, our proposed definition applied to any petroleum refining company having no more than 1,500 employees throughout the corporation as of January 1, 1999. We selected that date to prevent companies from “gaming” the system. However, as SBA pointed out in its comments, the Small Business Act regulations specify that, where the number of employees is used as a size standard, as we proposed for small refiners, size determination is based on the average number of employees for all pay periods during the preceding 12 months. Since we intended to use SBA’s size standard in our proposal, we are incorporating that definition correctly in today’s action. It is also worth mentioning that SBA shares our concerns about preventing companies from gaming the system and that it solved this problem specifically by using the average employment over 12 months. In addition, the averaging concept was designed to properly address firms with seasonal fluctuations, according to SBA.

Second, we’re amending the small refiner definition to include a corporate capacity cap. We believe such a corporate capacity limitation is necessary to ensure that only truly small businesses benefit from the relaxed interim standards. Furthermore, we received many comments we should adopt a threshold based on crude capacity as specified in the Clean Air Act and used in past EPA fuel programs.

As proposed, small refiners will be permitted to generate and trade sulfur credits and allotments if they reduce sulfur levels early in 2000-2003. In today’s action, we are also allowing them to generate credits in 2004-2007. Furthermore, they may use credits that they generate in 2000-2007 and/or purchase credits from another refinery to meet their average standard during 2004-2007. A small refiner may sell credits in 2004 and beyond provided they honor the credit life provisions explained in the ABT section (Section IV.C.1.c., above) while at the same time meeting the small refinery standards.

a. Extensions Beyond 2007 for Qualifying Small Refiners

We are also finalizing our proposed hardship relief provision for qualifying small refiners with some added detail based on the feedback we received during the public comment period. Beginning January 1, 2008, all small companies’ refineries must meet the national sulfur standard of 30 ppm on average and the 80 ppm cap, except small refineries that apply for and receive an extension of their 2007 standards. An extension will provide a given small refinery up to an additional two years to comply with the national standards. An extension must be requested in writing and must specify the factors that demonstrate a significant economic hardship to qualify the refinery for such an extension. Factors considered for an extension could include, but are not limited to, the refinery's financial position; its efforts to procure necessary equipment and to obtain design and engineering services and construction contractors; the

Tier 2/Sulfur Regulatory Impact Analysis - December 1999

availability of desulfurization equipment, and any other relevant factors.

In order for us to consider an extension, a refiner must submit a detailed request for an extension by January 1, 2007 demonstrating that it has made best efforts to obtain necessary financing, and must provide detailed information regarding any lack of success in obtaining financing. In addition, the refiner must meet the compliance plan requirements described below. If we determine that the refiner has made the best efforts possible to achieve compliance with the national standards by January 1, 2008, but has been unsuccessful for reasons beyond its control, we will consider granting the hardship extension initially for the 2008 averaging period. If further relief is appropriate for good reasons, we will consider a further extension through the 2009 averaging period but in no case will this relief be provided unless the refiner can demonstrate conclusively that it has financing in place and that it will be able to complete construction and meet the national gasoline sulfur standards no later than December 31, 2009.

b. Compliance Plans for Demonstrating a Commitment to Produce Low Sulfur Gasoline

This final rule includes a compliance plan provision for those refiners who may seek a hardship extension of their approved interim standards. This provision requires that those refiners with approved interim standards who seek a hardship extension must submit a series of reports to EPA discussing and describing their progress toward producing gasoline that meets the 30/80 ppm standards by January 1, 2008. We expect that small refiners will need to begin preparations to meet the national standards in 2008 by 2004. However, we understand that the potential exists for some small refiners to face additional hardship circumstances that will warrant more time to meet the standards. For this reason, we have adopted provisions (see above) allowing refiners subject to the interim standards to petition us and make a showing that additional time is needed to meet the national standards. To properly evaluate hardship applications, we are requiring demonstrations of good faith efforts towards assessing the economic feasibility, along with the business and technical practicality of ultimately producing low sulfur gasoline. Such progress reports must be submitted for a refiner to receive consideration in any future determinations regarding hardship extensions. However, these reports are not required from refiners who will not be seeking a hardship extension.

By June 1, 2004, such refiners would need to submit preliminary information in the form of a report outlining its time line for compliance and a project plan discussing areas such as permits, engineering plans (e.g., design and construction), and capital commitments for making the necessary modifications to produce low sulfur gasoline. Documents showing activities and progress in these areas should be provided if available.

By no later than June 1, 2005, these small refiners would need to submit a report to us

Chapter VIII: Regulatory Flexibility Analysis

stating in detail progress to date based on their time line and project plan. This should include copies of approved permits for construction of the equipment, contracts for design and construction, and any available evidence of having secured the necessary financing to complete the required construction. If any difficulties in meeting this requirement are anticipated, the refiner must submit a detailed report of all efforts to date and the factors that may cause delay, including costs, specification of engineering or other design work still needed and reasons for delay, specification of equipment needed and any reasons for delay, potential equipment suppliers and history of negotiations, and any other relevant information. If unavailability of equipment is a factor, the report must include a discussion of other options considered, and the reasons these other options are not feasible.

In addition, the small refiner would need to provide evidence by June 1, 2006, that on-site construction has begun at its refinery(s) and that absent unforeseen circumstances or problems, they will be producing complying gasoline (30/80 ppm) by January 1, 2008. While the submission of these progress reports is evidence of a refiner's good faith efforts to comply by 2008, it does not bind the refiner to make gasoline in 2008. There are several reasons why a refiner may choose to exit the gasoline-production business in 2008 that go beyond the low sulfur gasoline requirement.

As a result of a refiner's efforts in moving toward compliance with the 2008 standards, for market, economic, business, or technical reasons, the company could choose not to make gasoline in 2008. Although we do not believe this will be the likely outcome for small refiners, we cannot preclude it. Any refiner that makes such a determination in its progress reports will have until 2008 to transition out of gasoline production, but will not be considered for a hardship extension.

2. Small Certifiers of Covered Vehicles

During the SBREFA process and in the Tier 2 proposal, we discussed compliance flexibilities for small certifiers of cars and light trucks who are subject to the Tier 2 standards. The final rule includes several provisions that should ease the compliance burden for some, if not all, of these companies.

Small certifiers will benefit from the provisions we are finalizing for all SVMs, not just those that are also small entities according to the SBA definition (primarily ICIs and alternative fuel converters). One of these provisions allows SVMs to opt-out of the interim standards during the phase-in years and to then comply with the final standards with 100 percent of their vehicles at the end of the phase-in period. Another aspect of the final rule is a one-year hardship provision for SVMs that will allow these manufacturers to apply for an additional year to meet any of the 100 percent phase-in requirements. Finally, SVMs will be allowed to participate in the

Tier 2/Sulfur Regulatory Impact Analysis - December 1999

averaging, banking, and trading (ABT) program. (Although our proposal did not include ICIs in the ABT program, the final rule includes them, albeit with slightly different requirements because of the unique nature of their business). See Section V of the Preamble of this rule for more information on the treatment of small certifiers.

Chapter VIII References

1. Report of the Small Business Advocacy Panel on Tier 2 Light-Duty Vehicle and Light-Duty Truck Emission Standards, Heavy-Duty Gasoline Engine Standards, and Gasoline Sulfur Standards, October 1998.